

## **Impact of nitrates and phosphates on bacterial communities in model hydroecosystems**

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### **Abstract**

Changes in the amount and structure of bacterioplankton in conditions of pollution with nitrates and phosphates were investigated in model mesocosms with natural water and aquatic macrophytes (*Typha angustifolia*) in a seasonal dynamics. The obtained data were suggested on the role of bacterioplankton in the processes of elimination of nitrates and phosphates from the polluted model hydroecosystems. Dynamics of denitrifiers and nitrifiers as well as polyphosphate-accumulating bacteria were found in water and ground of model mesocosms. It was found that aquatic macrophyte favored to the process of bacterial autopurification of the polluted waters. © IDO SI Publications, 2011.

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### **Keywords**

Denitrifier, Hydroecosystem, Mesocosm, Nitrate, Nitrifier, Phosphate, Polyphosphate-accumulating bacteria